

**A PRION-LIKE FORM OF CPEB AND RELATED COMPOSITIONS AND METHODS**

**Abstract of the Disclosure**

The present invention provides methods for determining whether an agent facilitates the conversion of a cytoplasmic polyadenylation element binding (CPEB) protein from its non-prion form to its prion form. This invention also provides methods for determining the presence and amount of the prion form of CPEB protein in a cell. This invention also provides methods for facilitating the conversion of a non-prion CPEB protein to its prion form. This invention also provides an isolated prion form cytoplasmic polyadenylation element binding (CPEB) protein and compositions comprising a therapeutically effective amount of an agent that facilitates the conversion of CPEB protein from its non-prion form to its prion form, and methods of making such compositions.